The Association for Clinical Biochemistry & Laboratory Medicine

Clinical Biochemistry Case 1 – Raised testosterone in a female patient

Patient: 25 y/o female GP patient

Clinical details: Trying to conceive

No significant past medical history.

Results:

- U&E, LFT, bone profile, fasting glucose, HbA1c, TSH and ferritin – normal
- Testosterone = 5.3 nmol/L (<3.1 nmol/L)

Question 1 – What are the possible causes of a raised testosterone in a female patient?

Question 2 – If you were duty biochemist on the day that these results were validated what action would you take (if any)?

Question 3 – Suggest three further tests (other than those listed below) which would be useful in the investigation of this patient. These may be laboratory or non-laboratory tests.

Results of further hormone testing:

- LH = 0.6 IU/L
- FSH = 0.74 IU/L
- Oestradiol = 3081 pmol/L
- Prolactin = 705 mIU/L (70 – 566 mIU/L)

Question 4 – What diagnosis are these results consistent with?

Question 5 – Is further investigation required? Please explain your answer.